

The Botany of the Southern Natal Drakensberg

Hilliard, O.M. & Burtt, B.L. "The Botany of the Southern Natal Drakensberg", 1987, National Botanic Gardens, Kirstenbosch, Cape Town.

This is another product of the authors' years of combined botanical exploration and research in Natal (South Africa). It is much more than a checklist of some 1500 plants from an area of 1115 km² (430 square miles) as measured on the map but much larger because of its mountainous terrain. The botany in its widest sense includes more than the usual subjects of topography, climate, fire, historical exploration, vegetation patterns and the actual checklist of all flowering plants, ferns and mosses. The vignettes such as the discussions on 'pollination' syndromes, 'hybrids', 'growth forms', 'assimilating stems' etc. reflect the work of observant collectors to whom the smallest detail matters. It might seem extravagant to include several pages on natural hybrids outside the checklist, but in a world with few areas so unaffected by exploration and land use such hybrids in undisturbed vegetation are important to note.

The 'Enumeration of the flora' provides ecological details and in plants other than mosses phytogeographical information at genus and species level and general comments usually of a taxonomic nature. The book is a source of bibliographical information as references to recent relevant literature are common. Of the many approaches to the presentation of local floras, this is one which can certainly be recommended. Instruments for identification of plants from this region are to be found in the by now somewhat dated Ross (1972) 'Flora of Natal', but a key to the species of *Erica* and *Philippia* is included here. The photographs of plants usually shown in their habitat are informative, but the printing has reduced clarity in some of them. It is a pity, although probably unavoidable that the illustrations are towards the end very much out of synchrony with the text.

The particular area was, it seems, not selected entirely because it is a little known area, but rather as a vehicle for a discussion of the phytogeography of the area within the Drakensberg and in turn the flora of the Drakensberg within Africa. Analyses of the composition of the flora of various areas and their affinities lead the authors to recognise on top of the Drakensberg an Eastern Mountain Region separate from the Afro-alpine or Afro-montane Regions.

This reference book presents a high standard for a local flora in conciseness and clarity of presentation from finest detail to overview by two authors who are uniquely familiar with the area and its plants.

Hilliard, O.M. & Burtt, B.L. "The Botany of the Southern Natal Drakensberg", *Annals of Kirstenbosch Botanic Gardens*, vol. 15, pp. 253, plates 37 (colour photographs), 6 maps. (Published by National Botanic Gardens, Kirstenbosch; Claremont). Hard-bound. R52.40 (Overseas price US\$ 25.00 incl. postage).

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Conserving Genetic Diversity in Crop Plants

"Botanic Gardens and Germplasm Conservation", 1986, Harold L. Lyon Arboretum
Lecture Number Fourteen, University of Hawaii Press: Honolulu

The Harold L. Lyon Arboretum of the University of Hawaii has since 1970 held an annual lecture which is published by the Arboretum Fund and University of Hawaii Foundation. The fourteenth lecture was published in 1986 entitled 'Botanic Gardens and Germplasm Conservation', by Professor Nigel J.H. Smith of the Department of Geography, University of Florida. This is a

topical and important subject which is likely to receive much more attention with recent regional developments within the International Association of Botanic Gardens, (Larsen & Morley, in press), and the creation of the I.U.C.N. Botanic Gardens Conservation Secretariat at Kew, (Heywood & Wyse Jackson, 1988). The role of botanic gardens as centres for *ex situ* conservation of rare and endangered species, as well as cultivar germplasm, is rapidly expanding, as is the corresponding need for botanic gardens to avoid duplicating each others activities and to co-operate more in securing additional resources. The dramatic loss of habitat, particularly in tropical and arid land ecosystems, especially in developing nations, leaves very little time in which to undertake responsible and considered conservation measures.

Unfortunately, some three quarters of the article deals with an historical description of the role of largely tropical botanic gardens as plant acclimatization centres, in many cases rather briefly through lack of space. The list of references includes a number of useful up-to-date titles. The last seven pages contain interesting observations on how different tropical botanic gardens have developed collaborative germplasm conservation programmes with agricultural research organisations, city recreation departments and private citizens. The author visited centres in Singapore, Indonesia, the Philippines, Hong Kong, Macau, and the Hawaiian Islands in 1985.

On p. 12, showing a world map of the distribution and founding dates of botanic gardens involved in the spread of tropical crops, there is no reference to the Jardin Botanique de Victoria, Cameroon, founded in 1892 (p. 9), or either of the botanic gardens in Brisbane or Sydney. Powell's (1972 & 1973) critical articles on crop plant introduction to Jamaica by Captain Bligh could have usefully supplemented the information obtained from the semi-popular work by Eyre (1966). The correct spelling is Castleton Botanic Garden in Jamaica, not "Carleton" on p. 20, and on p. 28 it would have been appropriate to mention that Sir Joseph Banks also visited Australia on the Cook voyage (Tahiti, New Zealand, the East Indies and South Africa are all cited). On p. 34 the possible impression is given that Augustine Henry was employed in the Irish consular service in China; he worked for the British Government in the Imperial Maritime Customs Service. Although he lived for most of his European life in Ireland, he was born in Dundee in Scotland! The collections of herbarium specimens and such seed he obtained were largely sent to Kew, or the Arnold Arboretum to a lesser extent, certainly not Ireland.

Despite these minor points the lecture is interesting, attractively produced and continues the worthwhile tradition of the Harold L. Lyon Arboretum Lecture Series.

Smith, N.J.H. (1986). 'Botanic Gardens and Germplasm Conservation' Harold L. Lyon Arboretum Lecture Number Fourteen, pp. 55, 14 monochrome illustrations, 1 map. (University of Hawaii Press; Honolulu). Soft bound US\$8.00 available from University of Hawaii Press, Order Department, 2840 Kolowalu Street, Honolulu, Hawaii 96822.

References

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 Powell, D. (1973). 'The voyage of the plant nursery, H.M.S. Providence 1791-1793'. *Bull. Institute of Jamaica* (Science) 15(2): 1-70.

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